

REMARKS

The present communication responds to the Office Action dated October 28, 2004. In that Office Action, the Examiner indicated that claims 5, 6, 8, 17, 18-21 and 25 would be allowable if rewritten, and they have been rewritten to place them in allowable form. The Examiner rejected claims 1-4, 7, 9-16 and 22-24 under 35 U.S.C. 102(e) as being anticipated by Haar et al. Independent claim 1 has been amended, and reconsideration and allowance of these claims are respectfully requested.

Objection to the Drawings

The Examiner objected to Figure 1b, stating that element 6 has no lead line. The applicants respectfully note that Figure 1b does not include an element 6. Figure 1a, however, does include an element 6. Accordingly, the applicants assume the Examiner intended to object to Figure 1a. While element 6 of Figure 1a does include a lead line, that lead line did appear to end short of the numeral 6. Thus, that lead line has been extended to lead to the numeral 6.

Rejection under 35 U.S.C. § 112

Claims 19 and 20 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 19 has been amended to overcome this rejection.

Rejection under 35 U.S.C. § 102

Claims 1-4, 7, 9-16 and 22-24 were rejected under 35 U.S.C. § 102(e) as being anticipated by Harr et al. This rejection is traversed at least for the following reasons.

Haar does not disclose “a source of potential energy comprising a compressible substance put under pressure within the container by the pressure generating mechanism, whereby said potential energy is substantially a compression energy of said substance.” Haar discloses a needleless injection system. The Examiner specifically refers to the embodiment of Figure 4 in rejecting the present claims. The apparatus of Haar is described most fully in the description of Figure 1. The description of Figure 4 then sets forth the differences between Figure 4 and Figure 1. Thus, the embodiment of Figure 1 will first be discussed.

The needleless injection system includes a hydrostatic chamber containing a hydrostatic pressure transfer medium. Pressure may be exerted on the hydrostatic pressure transfer medium to cause liquid medication to be ejected:

Hydrostatic chamber 16 contains a hydrostatic pressure transfer medium 17 and is so configured and dimensioned that medication unit 11 is located at least partially within the hydrostatic chamber 16 and that a pressure-exerted on transfer medium 17 would cause wall 13 of the first region of medication unit 11 to deform, so that the volume available for said liquid medication 12 in the first region is reduced. In a preferred embodiment wall 13 of the first region collapses under a pressure exerted thereon by transfer medium 17 and the entire volume of liquid medication 12 is ejected through jet nozzle 14. *Haar, Column 3, lines 24-34.*

The hydrostatic pressure transfer medium 17 is used to transfer pressure from a piston 18 to the wall 13:

Piston 18 has a first end 19 and a second end 21 opposite to first end 19. First end 19 has a surface which forms a closure of hydrostatic chamber 16, and is adapted for applying a pressure on gel 17 contained in hydrostatic chamber 16. *Haar, Column 3, lines 50-54.*

In order to transfer pressure, the gel is substantially incompressible:

In general terms hydrostatic pressure transfer medium 17 is a bio-compatible material which flows easily when subject to a pressure of about 200 to 300 bar and which is substantially incompressible. Transfer medium 17 transmits the piston pressure to the single dose medication container in a hydrostatic manner, is inert relative to the medication and other materials of construction, and is not expected to leak or evaporate over the storage life of the injection system. *Haar, Column 3, lines 35-42.*

Thus, Figure 1 of Haar teaches applying pressure on a piston, the piston then applying pressure on a transfer medium which in turn applies pressure to medication unit, thereby causing a volume of liquid medication to be ejected.

In the embodiment of Figure 4 of Haar, a push rod 38 and piston 41 perform the function of piston 18:

As shown by FIG. 4, in this embodiment a molded rubber cup spring 37 is used to generate the force to be exerted on a push rod 38. When push rod 38 is displaced by a force generated by sudden relaxation of spring 37 a first end 40 of push rod 38 impacts on a piston 41 which then exerts a corresponding pressure on gel 17 contained in hydrostatic chamber 15. Push rod 38 and piston 41 thus perform a similar function as piston 18 in the embodiment described above with reference to FIGS. 2 and 3.

As with the embodiment of Figure 1 of Haar, exerting pressure on the gel via the piston causes ejection of the liquid medication:

When trigger 36 is actuated after the preparation steps just described, ball latch 39 suddenly releases push rod 38 and thereby allows sudden relaxation of rubber spring 37. This relaxation causes push rod 38 to impact on piston 41 which in turn suddenly exerts an hydrostatic gel pressure on the deformable wall 13 and causes ejection of liquid medication 12 contained therein through jet nozzle 15 of insert 14 of the second region of medication unit 11. *Haar, Column 8, lines 24-31.*

Thus, while Haar teaches providing a gel as a hydrostatic pressure transfer medium for transferring pressure from a piston to a medication unit, thereby expelling the liquid medication, Haar does not teach “a source of potential energy comprising a compressible substance put under pressure within a container by a pressure generating mechanism, whereby said potential energy is substantially a compression energy of said substance,” as recited by claim 1.

It is thus respectfully submitted that Haar does not anticipate claim 1. Each of claims 2-4, 7, 9-16 and 22-24 depends either directly or indirectly from claim 1. Accordingly, it is submitted that Haar does not anticipate these claims. Reconsideration and allowance of claims 1-4, 7, 9-16 and 22-24 over Haar are thus respectfully requested.

Allowable Subject Matter

Claims 5, 6, 8, 17, 18, 21 and 25 were objected to as being dependent upon a rejected base claim, but the Examiner indicated they would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 5, 8, 17, 18 and 25 have been rewritten in independent form. Claim 6 depends from claim 5, and claim 21 depends from claim 18. Accordingly, it is respectfully submitted that claims 5, 6, 8, 17, 18, 21 and 25 are allowable.

The Examiner further indicated that claims 19 and 20 would be allowable if rewritten or amended to overcome the rejections under 35 U.S.C. § 112, 2nd paragraph. Claim 19 has been rewritten to overcome this rejection, and has further been rewritten in independent form. Accordingly, it is respectfully submitted that claims 19 and 20 are allowable.

Conclusion

It is believed that this response generates additional claim fees (for additional independent claims) in the amount of \$800.00. A check in this amount is enclosed, and the Office is hereby authorized to charge any deficiency to Deposit Account No. 04-1420.

This application now stands in allowable form, and reconsideration and allowance are respectfully requested.

Respectfully submitted,

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AMENDMENTS TO THE DRAWINGS

The attached sheet of drawings (in the attached Appendix) includes changes to Figure 1a. This sheet replaces the original sheet including Figures 1a-1b. In Figure 1a, previously omitted element 6 has been amended to include a lead line.

Attachments: Replacement Sheet

Annotated Sheet Showing Changes

Marked-Up Drawing



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FIG. 1b

